This hurricane moved steadily northwestward after the end of June, entered the Gulf of Mexico, and turned westward to the Mexican coast a short distance south of the mouth of the Rio Grande, where it crossed the coastline and disappeared, July 6th.

A fuller discussion of this hurricane will appear in the July REVIEW.

Fog.—June was, as usual, a bad month for fog over the northern part of the Atlantic. Fogginess was reported on more than half the days of the month in several 5° squares between the Grand Banks and Cape Hatteras; on 7 to 13 days over the middle portion of the routes eastward to the 30th meridian and north of the 40th parallel; and on a few days in the region east of that meridian. Fog was reported on 1 or 2 days over mid-ocean between 35° and 40° N., and also on 2 days near the American coast southeast of Hatteras, below latitutde 35°.

Trans-Atlantic aviation.—Two noteworthy airplane crossings of the north Atlantic were successfully accomplished in June 1933. The first, in less than 24 hours, and establishing a speed record, was by the veteran American aviator James Mattern, who crossed from New York to a point near Oslo. Charts VIII and IX, for June 3 and 4, show the weather conditions attending this flight.

On June 11th two officers of the Spanish Army—Captain Barberan and Lieutenant Collar—took off from Tablada, Spain, with their objective a nonstop flight to Cuba. They landed on June 12 at Camaguey, having successfully completed the longest trans-Atlantic flight which so far has been made. Charts X and XI, for June 11 and 12 are presented to show the conditions attending this extraordinary venture.

It is noted with regret that these courageous flyers were lost a few days later on their further attempt to cross the Gulf of Mexico from Habana to Mexico City.

OCEAN GALES AND STORMS, JUNE 1933

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN			° ′	° ′				*Inches*					
Independence Hall, Am. S.S.	New York	Le Havre	40 22 N	70 20 W	June 1	Noon, June 1.	June 1	29.70	NNE.	NE, 7	NE	NE, 8	Steady.
Washington, Am.S.S.	Port Arthur	New York	35 28 N	75 12 W	do	do	do	29.70	N	N, 8	NE	N, 8	N-NE.
Elmsport, Am.S.S.	New Orleans	Bremen	46 05 N	29 40 W	May 31	6 p., 1	June 2	29.60	NW	NW, 8	NW	NW, 8	Steady.
Livenza, Ital.S.S.	Gibraltar	New York	41 15 N	54 26 W	June 2	10 a., 2	do	29.67	SW	SW, 8	N	SW, 8	SW-N.
Black Tern, Am.S.S.	Antwerp	Baltimore	49 31 N	26 09 W	June 3	8 p., 3	June 5	29.49	SW	SW, 7	WNW	W, 9	SSW-SW-W.
Quaker City, Am.S.S.	Dundee	Boston	58 07 N	16 10 W	do	10 p., 3	June 4	29.67	S	—, 7	S	S, 9	NW-W.
Excelsior, Am.S.S.	Casablanca	do	[1] 39 36 N	49 00 W	June 7	12 mdt, 7	June 8		SW	SW, 8	NNW	SW, 8	SW-NNW.
Statendam, Du.S.S.	New York	Rotterdam	40 27 N	72 45 W	June 10	4 a., 10	June 10	29.77	S	NW, 11	W	NW, 11	Var.
Caledonia, Br.S.S.	Glasgow	New York	55 30 N	8 00 W	June 17	12mdt, 17	June 18	28.94	WNW	WNW, 9	NW	WNW, 9	Steady.
Liberty Glo, Am.S.S.	Antwerp	Charleston	49 24 N	6 27 W	June 18	6 a., 18	June 20	29.66	NW	NW, 7	WNW	—, 8	Do.
Mar Cantabrico, Span. M.S.	Heulva	Philadelphia	40 38 N	56 48 W	do	7 p., 18	June 18	30.04	SW	SW, 9	SW	SW, 9	
Caledonia, Br.S.S.	Glasgow	New York	55 08 N	21 22 W	June 19		June 19		NW		NW	NW, 8	Steady.
Motocarline, Belg.M.S.	Aruba	Rotterdam	46 59 N	15 45 W	June 20	2 a., 21	June 22	30.04	NW	NW, 8	NW	NW, 8	
Darien, Pan.S.S.	Puerto Barrios.	Galveston	15 55 N	88 00 W	June 23	3 a., 23	June 23	29.69	SE	SE, 8	SE	SE, 8	Steady.
Persier, Belg.S.S.	Rio de Janeiro.	Antwerp	9 04 N	27 20 W	June 25	4 a., 26	June 26	29.86	W	NNW, 7	W	WNW, 7	NNW-W.
Do	do	do	14 56 N	24 52 W	June 27	4 p., 27	June 30	29.92	NNE.	NNE, 7	NE	NE, 8	Steady.
Nerissa, Br.S.S.	Demerara	Port of Spain	[1] 10 05 N	62 05 W	do	8 p., 27	June 27	29.81	NE	ENE, 8	ESE	ENE, 8	NE-ENE.
Gonzenheim, Ger.S.S.	Cardiff	Newfoundl'd	52 20 N	42 40 W	June 28	8 p., 28	June 29	29.72	S	SW, 8	NW	SW, 8	SW-WSW.
Gulfcrest, Am.S.S.	New York	Las Piedras	13 17 N	69 40 W	June 29	6 a., 29	do	29.10	E	SE, 12	SE	E, 12	NE-E-SE.
Chateau Thierry, U.S.A.T.	Cristobal	San Juan	14 35 N	73 00 W	do	10 p., 29	June 30	29.64	E	SE, 8	E	SE, 8	NNE-SE.
Minnesotan, Am.S.S.	do	New York	16 45 N	75 45 W	June 30	2 p., 30	do	29.78	NE	ENE, 9	ENE	ENE, 9	NE-ENE.
Eastern Sun, Am.S.S.	Los Angeles	Philadelphia	[1] 15 50 N	76 10 W	do	3 p., 30	do	29.00	NE	NW, 12	SE	NW, 12	NNW-SW-S.
Mobile City, Am.S.S.	New York	Colon	16 45 N	75 50 W	do	do	do	29.68	E	E, —	S	SE, 9	E-SE-S.
NORTH PACIFIC OCEAN													
Silverguava, Br.M.S.	Manila	Los Angeles	36 15 N	124 42 W	June 2	7 p., June 3.	June 3	29.65	SSW	NE, 10	SE	NE, 10	ENE-N.
Fernhill, Nor.M.S.	do	do	26 57 N	130 35 E	do	7 p., 2	do	[2] 29.61	SSW	NNE, 8	NE	NNE, 8	SW-W-NNE.
Sangstad, Nor.M.S.	Los Angeles	Yokohama	34 10 N	167 40 E	June 4	7 a., 5	June 7	29.44	SE	SSE	NW	SSE, 8	SSE-W-NW.
Ogura Maru, Jap.M.S.	San Luis, Calif.	do	36 04 N	169 26 E	June 5	4 p., 5	June 5	29.45	SE	S, 6	WSW	SE, 8	SE-S-SW.
Irisbank, Br.M.S.	San Francisco.	Manila	23 27 N	137 52 E	June 15	1 p., 15	June 15	29.79	SSW	SW, 8	SW	SW, 8	SSW-SW.
Steel Exporter, Am.S.S.	Hawaiian Islands.	Balboa	13 47 N	102 00 W	do	4 a., 15	do	29.65	NE	E, 7	SW	SE, 8	NE-E-SE.
Texas, Am.S.S.	Philippine Islands.	San Francisco.	33 45 N	151 20 E	June 16	4 a., 17	June 17	29.31	SSE	SSE, 8	W	SW, 8	SE-SW.
Pres. Jackson, Am.S.S.	Honolulu	Yokohama	34 52 N	152 51 E	June 17	5 a., 17	do	29.11	SSE	SSW, 7	NW	S, 8	S-SW.
Hakubasan Maru, Jap.S.S.	Yokohama	Los Angeles	44 23 N	165 52 E	June 19	Noon, 20	June 22	29.32	SSE	SW, 8	W	SW, 8	2 points.
Grays Harbor, Am.S.S.	Philippine Islands.	do	39 37 N	174 24 E	June 28	2 p., 28	June 28	29.50	S	SSW, 9	W	SSW, 9	SSW-SW.
Makura, Br.S.S.	Papeete	San Francisco.	37 17 N	122 56 W	June 29	4 a., 30	June 30	29.87	NNW	NW, 8	NW	NW, 8	

[1] Position approximate.
[2] Barometer uncorrected.

NORTH PACIFIC OCEAN, JUNE 1933

By WILLIS E. HURD

Atmospheric pressure.—The weather over the greater part of the North Pacific Ocean during June 1933 was notably under the dominance of anticyclonic conditions. Several depressions were observed in Far Eastern waters, where the lowest average pressure of the month occurred, and several appeared over and south of the Aleutians, especially during the early days and a part of the last decade of the month. Many, however, were noted in the Bering Sea, and it was here and over Alaska that the shallow average center (St. Paul 29.90 and Point Barrow 29.88 inches) of low pressure for the extra-tropical region occurred. Departures from the normal pressures over the ocean were mostly small, as may be seen in the table herewith.

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, June 1933, at selected stations*

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Point Barrow	29.88	−0.11	30.18	3	29.50	26
Dutch Harbor	29.92	+.02	30.52	30	29.30	21
St. Paul	29.90	+.04	30.42	30	29.38	22
Kodiak	29.92	+.01	30.34	20	29.44	1
Juneau	29.94	−.07	30.41	11	29.52	1
Tatoosh Island	30.07	+.05	30.31	19	29.56	8
San Francisco	29.98	+.02	30.12	19	29.83	13
Mazatlan	29.88	−.02	29.96	4	29.78	13
Honolulu	30.07	+.03	30.16	30	29.93	10
Midway Island	30.09	+.04	30.28	30	30.00	1, 2, 10, 11
Guam	29.83	−.04	29.92	2	29.76	15, 18, 19
Manila	29.78	−.04	29.86	8	29.68	24
Naha	29.77	+.02	29.90	8, 22, 23	29.58	17
Chichishima	29.90	−.01	30.04	28	29.70	7, 15
Nemuro	29.86		30.20	27	29.54	7

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco, and Honolulu, which are based on 2 observations. Departures are computed from best available normals related to time of observation.

Cyclones and gales.—Cyclonic activity on the North Pacific during June 1933 was mostly of a mild type. Few gales were reported and those were mostly of moderate to fresh force (7-8). The highest velocity (force 10) known to occur was experienced by the British motor ship *Silverguava* on the 3d near 36° N., 125° W., during the brief existence of a small low off the central California coast. Another gale, but of fresh force only, occurred in the same locality on the 30th. West of the 180th meridian scattered gales were encountered on a few days; only one attained a force as high as 9. Two occurred in the Far Eastern tropics due to moderate depressions of the 2d and 15th. The lowest corrected pressure of the month was 29.11 inches, reported by the American steamer *President Jackson* near 35° N., 153° E. on the 17th.

A fresh southeast gale (lowest pressure 29.65) accompanied by shifting winds, owing perhaps to a short-lived cyclone, was encountered by the American steamer *Steel Exporter*, near 14° N., 102° W.

Fog.—Fog was by far the most important meteorological element on the North Pacific this month in its adverse effect upon navigation. Along the steamer routes north of the fortieth parallel fog was reported as occurring on 2 to 8 or more days in each 5° square traversed, with the area of least prevalence lying between the Washington-Oregon coast and 145° west longitude. Along the California coast it was noted on 12 days between Eureka and Point Arguello, and on 11 days thence southward to Lower California. Along the length of the Lower California coast fog was reported on 15 days. It is evident that frequent fogs occurred in the Bering Sea, since meager reports from between the sixtieth parallel and Nome indicate its formation on at least 10 days. The American steamer *Lurline* was reported delayed by fog 1 hour on the 15th in entering Los Angeles Harbor. The British steamer *City of Vancouver* reported continuous fog and inability to take position observations from the 16th to 22d along latitudes 47°–48° N., between longitudes 169° E. and 148° W.

SOUTHWEST MONSOON IN ARABIAN SEA AND BAY OF BENGAL, JUNE 1933

According to reports received from the American steamer *Yomachichi*, the southwest monsoon was active in the Gulf of Aden and the Arabian Sea during the early part of June. On the 10th, east of Sokotra Island, the observed velocity had risen to force 8.

The British motor ship *Cingalese Prince*, crossing the lower waters of the Bay of Bengal to Ceylon from the 17th to 20th, reported a steady monsoon current of moderate force. On the 25th and 26th, between longitudes 60° and 55° E., the force of the southwesterly winds ranged generally between 7 and 9, but rose at times to whole gale force (10).—W. E. H.